AD HOC FISHERIES INNOVATION WORKGROUP REPORT
ON HIGHLY MIGRATORY SPECIES ROADMAP - EXEMPTED FISHING PERMITS
METRICS AND BENCHMARKS

The Pacific Fishery Management Council's (Council) Ad Hoc Fisheries Innovation Workgroup (FIW) convened in-person on January 29 and 30, 2026. A quorum of FIW members, Council staff (with contractor support), and several members of the public attended the meeting. One member representing the HMSAS (Mr. Wraith) was absent due to poor weather conditions. Consistent with its charge, the FIW continued its work to develop and refine Council procedures to facilitate the more rapid creation of new highly migratory species (HMS) fishing gears that achieve the goals of the HMS Roadmap. The FIW focused on the development of metrics, benchmarks, and acceptable levels of bycatch as part of an evaluation framework for exempted fishing permit (EFP) performance. The FIW also developed recommendations related to EFP process improvements, including recommendations for the development of guidance and materials, and recommended modifications to Council Operating Procedure 20.

Based on the January meeting, the FIW offers the following requests of the Council:

- Consider and provide guidance on the FIW's proposed EFP evaluation framework, specifically:
  - Confirm the FIW's recommendation to not develop acceptable levels of bycatch and focus instead on benchmarks used to evaluate EFP performance;
  - Consider and provide guidance on the FIW's current recommended species and species group list for evaluating EFP bycatch performance (appendix A);
  - Consider and provide guidance on the FIW's updated preferred options for economic metrics and benchmarks for evaluating EFP economic viability performance; and
  - Review the FIW's work to date to establish bycatch metrics and benchmarks for evaluating EFP performance and provide any feedback.
- Review the FIW's recommendations for developing EFP guidance and materials.

EFP Evaluation Framework

The FIW continues to develop an EFP evaluation framework which will provide a systematic, transparent, and effective process for informing Council recommendations related to HMS EFPs, future regulatory actions and/or FMP amendments. The intention is for the framework to ultimately become part of the HMS Roadmap. It includes an overall performance goal (HMS Roadmap Goal B), performance metrics and benchmarks, definitions/role descriptions, and an outline of an evaluation process. Together, the metrics and benchmarks for economic viability and bycatch are intended to guide data collection and provide relevant information for more efficient and effective Council decision-making related to recommendations for HMS EFP applications and future regulatory actions and/or FMP amendments. The FIW presented preliminary recommendations on elements in the framework at the November 2025 Council meeting, and the FIW plans to provide a final version of the framework for Council consideration in June 2026. The sections below provide an update on the FIW's work to date on the elements in the framework.

Consideration of "Acceptable Levels of Bycatch"

The FIW reviewed the November 2025 guidance from the Council regarding setting bycatch benchmarks and "acceptable levels of bycatch." The FIW discussed the HMS Roadmap history and rationale for establishing "acceptable levels of bycatch." The FIW concluded that establishing separate "acceptable levels of bycatch" that were distinct from benchmarks is not appropriate or necessary for several reasons. Some FIW members expressed concerns that creating "acceptable levels of bycatch" (which are not used in any other Council-managed fishery) would create confusion between these Council-selected levels and other regulatory limits or allowances established under federal statutes such as the Marine Mammal Protection Act and the Endangered Species Act. The FIW (much like the Council) also struggled with different perceptions of what is deemed "acceptable." The FIW determined that clear benchmarks will serve the purpose of enabling the Council to effectively evaluate EFPs and emerging gears/methods and are sufficient for continuing to make progress towards the goals of the HMS Roadmap. Therefore, the FIW recommends focusing on defining and developing benchmarks that provide an effective basis for evaluating bycatch performance rather than focusing on "acceptable levels of bycatch."

Performance Metrics and Benchmarks - Definitions

Given the difficulty in defining "acceptable levels of bycatch" and the FIW's recommendation to focus on developing benchmarks instead, the FIW recommends the following definitions for HMS metrics and benchmarks on economic viability and bycatch performance:

- Metric: a form or unit of measurement.
- Benchmark: a point of comparison for providing broader context when evaluating the performance of EFPs and considering future regulatory actions and/or FMP amendments.

Role of Benchmarks

A framework that establishes benchmarks can provide consistency and context during Council evaluation of HMS EFP performance. The proposed benchmarks are based on reference levels from existing West Coast and other HMS fisheries and are expected to evolve over time as more information (related to the benchmarks) becomes available. The framework includes a suite of metrics and benchmarks that are intended to be simple, understandable, and reflect economic and environmental conditions that are relevant to West Coast fishing and fisheries operations and markets. Key considerations for benchmarks:

- Benchmarks will be used to support Council consideration of whether to recommend that National Marine Fisheries Service (NMFS) renew HMS EFPs;
- Benchmarks will be used to support Council consideration and scoping of future regulatory actions and/or FMP amendments, including potential new authorized fisheries; and
- Benchmarks are not regulatory in nature and will not be used as a basis for the Council to recommend that NMFS cancel EFPs during the permit period.

Economic Viability - Metrics and Benchmarks

The FIW has developed a recommended suite of metrics and benchmarks for evaluating the economic performance of EFPs to provide insight on the viability of new fishing gears/methods/approaches. The suite includes a diverse set of metrics to be considered together, while each metric provides a different aspect of economic viability (as described below).

Overview of the Economic Metrics and Benchmarks

The FIW recommends the use of five metrics to evaluate the economic performance of EFPs: 1) the number/percentage of EFPs fished/renewed; 2) EFP holders' views of economic viability; 3) gross profits; 4) catch per unit effort (CPUE); and 5) ex-vessel revenue. While most of the metrics are quantitative in nature, the FIW identified the importance of gathering qualitative and contextual information on economic viability from EFP holders. Table 1 includes a summary of the metrics, their type, and whether or not associated benchmarks would be developed. Data would be collected and synthesized annually for each metric to review EFP performance. The last two metrics, CPUE and ex-vessel revenue, could play a particularly important role in the consideration of regulatory actions and/or FMP amendments.

Since presenting the preliminary recommendations related to economic metrics and benchmarks at the November 2025 Council meeting, the FIW has made several refinements, including adding two new metrics based on FIW discussions and Council guidance: "number/percentage of EFPs fished and renewed" and "gross profit." The group agreed to remove "ex-vessel price" given the lack of consensus on that metric, the need to achieve a manageable suite of metrics and the desire to simplify.

Table 1: Summary of Economic Metrics and Benchmarks.

Economic Performance Metric	**Type of Metric**	**Development of Benchmarks?**
Number/percentage of EFPs fished/renewed	Quantitative	No
EFP holders' view of economic viability	Qualitative	No
Gross profit	Quantitative	Not initially; potentially in the future
Catch per unit effort (CPUE)	Quantitative	Yes
Ex-vessel revenue	Quantitative	Yes

Descriptions of the Metrics:

- *Number/Percentage of EFPs Fished/Renewed:* Information about the number and percentage of EFPs that are fished and renewed provides insights into continued interest in a fishing gear/method/approach and is easy for NMFS to calculate. It is important to note that EFP participants may not fish the EFP due to a range of reasons unrelated to the gear or method (personal challenges, unfavorable environmental conditions, market dynamics, etc.). In addition, renewing an EFP may not necessarily mean a fishery operator would participate in a future authorized fishery.

- *EFP Holders' Views on Economic Viability:* The FIW has emphasized the importance of individual fishery operators' views of economic viability of the gear/method tested in the EFP. This information would be collected through a series of focused questions, potentially

in an EFP report template. Council staff is working with NMFS to further discuss the potential collection of this information, including ensuring compliance with the Paperwork Reduction Act. The FIW recommends that these questions be included in the HMS Roadmap, to ensure they are documented in a way that allows consistency of application in the future. The primary questions (not the full set) include:

  - Did you find this gear/method profitable?
  - Would you continue to fish using this gear/method if allowed?
  - Would this gear/method be viable as your sole fishing method?
  - If you didn't find this gear/method profitable, what adaptations could improve viability (location, bait, depth, etc.)?

- *Gross Profits*: The FIW included gross profits from EFP fishing as an economic metric, which helps to provide key information about overall profitability and the incentives for fishery participants to keep fishing a gear type or method. Gross profits would be total revenue minus operating (variable) costs (does not include fixed costs).[1] This is the approach taken by most vessel operators at the completion of a fishing trip to calculate crew share. In the short term, NMFS can adapt an existing survey to collect operating cost information. In the longer term, cost questions could eventually be worked into an EFP report template (mentioned above). At least initially, this metric would not have associated benchmarks. The availability of relevant data would need to be assessed and then compiled, and benchmarks could potentially be created in the future if desired.

- *Catch per Unit Effort (CPUE)*: The FIW agreed to include CPUE as an economic metric, which would be standardized to allow comparison across gear types and fishing methods by using retained catch per fishing day. The FIW also agreed to develop CPUE benchmarks for swordfish and all HMS landings using 10-year averages from the following fisheries: Hawaii shallow-set longline (SSLL) fishery (east of 140° W Longitude); a combination of the Hawaii (HI) deep-set longline (DSLL) fishery (east of 140° W Longitude) and the West Coast (WC DSLL), grouped together to address confidentiality requirements due to the limited number of participants in the WC DSLL fishery; the WC drift gillnet fishery (DGN); and the WC deep-set buoy gear fishery (DSBG). This set of fisheries provides a wide range of points of comparison for different volume fisheries (see Table 2 for a summary of benchmarks).

- *Ex-vessel Revenue:* Ex-vessel revenue is the total dollar value of landings at first purchase. The FIW included ex-vessel revenue as a key economic metric, which would be scaled as revenue per fishing day to enable comparison between fisheries-level revenue to EFP-level revenue comparison. Ex-vessel revenue data for EFPs may need to be aggregated due to data confidentiality requirements; these issues will be further explored by Council staff and NMFS. Benchmarks would be developed for revenue from all landings for the same fisheries as mentioned above for CPUE using 10-year averages (see Table 2 for a summary of benchmarks).

[1] Operating or variable costs would be expenses that change in proportion with the amount of fish caught or fishing effort (expenses such as fuel, ice, or bait). Fixed costs remain the same regardless of how many fish are caught or fishing effort (expenses like a loan payment on a boat).

Table 2: Summary of Economic Metrics with Associated Benchmarks.

Performance Metric	Total # of Benchmarks	Species	Fisheries datasets	Time Horizon/Measure
CPUE	3	Swordfish	● Hawaii SSLL[2] (east of 140°W longitude)[3] ● WC DGN ● WC DSBG	10-year average
	4	All HMS landings	● Hawaii SSLL (east of 140°W longitude) ● Hawaii (east of 140°W longitude) and WC DSLL ● WC DGN ● WC DSBG	10-year average
Ex-vessel revenue	4	All landings	● Hawaii SSLL (landed on the West Coast)[4] ● Hawaii and WC DSLL (landed on the West Coast) ● WC DGN ● WC DSBG	10-year average

Since providing preliminary recommendations to the Council in November 2025, the FIW has made the following refinements related to the economic benchmarks:

- Reduced and simplified the number of benchmarks while retaining a range of West Coast fisheries that provide helpful points of comparison. Removed purse seine and albacore benchmarks; added deep-set buoy gear as a benchmark.
- Separated shallow-set and deep-set longline given different targets and fishing performance. Combined Hawaii deep set (east of 140°W) and WC deep-set longline into one benchmark given data confidentiality requirements due to the small number of participants on the WC.
- For Hawaii longline, subsetted data east of 140°W longitude (for data from observer reports) and HMS landings to the West Coast (for data from fish tickets) to reflect fishing and market conditions of the West Coast.

Bycatch - Metrics and Benchmarks

The FIW's preferred bycatch metrics and benchmarks are still under development. The FIW has expressed interest in using both an overall bycatch metric (with one benchmark) along with individual species and/or species groups metrics and benchmarks.

Draft Bycatch Metrics

[2] Only SSLL longline is included as a swordfish CPUE benchmark since DSLL does not specifically target swordfish.

[3] For CPUE, only data east of 140°W longitude would be used to better reflect fishing conditions off the West Coast.

[4] For ex-vessel revenue, only data landed on the West Coast would be included to better reflect market conditions on the West Coast.

Metrics will be recommended at different levels of resolution to assess bycatch performance:

- Overall bycatch metric (with one benchmark yet to be selected)
- Individual species and species groups metrics and benchmarks (under development)

Priority List of Bycatch Species

In order to develop individual species and species group-specific metrics and benchmarks, a list of prioritized bycatch species and species groups has been developed. The FIW determined that species groups would be sufficient for some sets of species including billfish, rays, and albatross. For sharks, the FIW would develop a species group metric/benchmark as well as individual species metrics/benchmarks for white sharks and blue sharks. Because several species of marine mammals and sea turtles are highly vulnerable and warrant closer tracking at the individual species level, these species would have individual species metrics/benchmarks. For seabirds, the FIW recommends removing all shearwater species (given that none are Endangered Species Act (ESA)-listed) and creating an albatross species group that would also include endangered short-tailed albatross. The proposed list of species and species groups for which benchmarks will be established is provided in Appendix A.

Individual Species and Species Groups Data

The FIW is reviewing bycatch data for each species and species group:

- Individual species-level counts of bycatch
- Individual species bycatch per unit effort rate (bycatch per fishing day)
- Individual species bycatch-to-catch ratio (bycatch divided by all retained catch)

The FIW discussed basing bycatch calculations on individuals released dead/injured/unknown. However, data is not collected on "injured" individuals for all species groups. In addition, while "injured" is recorded for marine mammals, it requires further assessment by NMFS to determine whether the injury was "serious" or not. Therefore, further discussions are needed as to whether and how to include "injured" individuals given these issues.

Information to Inform Benchmark Development

In the development of bycatch benchmarks, the FIW agreed to consider a compilation from authorized fisheries for all of the data above. The compilation of data will include the 10-year averages from the following fisheries:

- Hawaii SSLL (east of 140°W longitude)
- Hawaii and WC DSLL (east of 140°W longitude)
- WC DGN
- WC DSBG

Other species-specific information will be considered when developing the specific benchmarks. Examples include Potential Biological Removal (PBR) for marine mammals from the Pacific Marine Mammal Stock Assessment Report and Incidental Take Statement allowance for ESA-listed species in the Biological Opinions for the drift gillnet fishery and the "longline-type" (e.g., extended link buoy gear, mid-water snap gear, modified shallow-set longline) EFPs.

EFP Evaluation Process

Additional components of the EFP evaluation process are still being developed. These will be presented to the Council for consideration in June. They include:

- Lead and timing for synthesizing EFP report information (applying metrics and benchmarks) and compiling reports from EFP holders
- Review of EFP performance by the HMS Advisory Bodies
- The frequency of reviewing the EFP evaluation framework and updating EFP metrics/benchmarks

EFP Guidance and Materials Recommendations

The FIW has discussed the development of EFP-related guidance and materials and offers the following recommendations for Council consideration:

- Council staff should be directed to support NMFS in developing materials such as infographics (such as flow charts or timelines) and Frequently Asked Questions (FAQs) to help EFP applicants understand and navigate the EFP process. Council staff will also update Council resources such as the EFP landing page and HMS Roadmap-related documents. The FIW will provide an update at the June Council meeting on progress to develop EFP-related guidance.

- The HMS advisory bodies (the Highly Migratory Species Advisory Subpanel (HMSAS) and Highly Migratory Species Management Team (HMSMT)) should hold extra time at their November and March meetings for applicants to informally discuss potential ideas for EFPs and receive HMSAS and/or HMSMT feedback. These early interactions will assist applicants with submitting successful EFP applications.

EFP Process Improvement Recommendations

During the January meeting, the FIW identified a suite of EFP process improvement recommendations, including proposed modifications to COP 20. A few of the recommendations require follow-up from Council staff to develop proposed revisions for FIW consideration. The FIW will provide the recommendations, including a redline with FIW-proposed edits, in a supplemental report.

Future Meeting and Workload Planning

The FIW will meet briefly on March 3rd just prior to the March Council meeting to continue discussions on bycatch metrics and benchmarks and the other remaining topics. Members of the FIW will continue developing portions of the framework and other Roadmap elements. In addition, the FIW agreed that meeting in person was crucial to making progress on these complicated issues and appreciates Council and Executive Director support for the meeting. While much progress was made on January 29 - 30, the FIW sees a need for another in-person session in order to finalize the EFP evaluation framework (including the benchmarks) and process improvements. If the Council budget can accommodate it, the FIW recommends one more in-person meeting in the late April/early May time frame.

APPENDIX A - PRIORITIZED LIST OF BYCATCH SPECIES AND SPECIES GROUPS

Billfish (only species group metric/benchmark)

Sharks (species group and individual species metrics/benchmarks for two species)

- White shark
- Blue shark

Rays (only species group metric/benchmark)

Marine Mammals (no species group metric/benchmark; only individual species metrics/benchmarks)

- Bottlenose dolphin
- Risso's dolphin
- Common dolphin (long-beaked)
- Northern right whale dolphin
- Pacific white-sided dolphin
- Fin whale
- Humpback whale
- Gray whale
- Short-finned pilot whale
- Minke whale
- Sperm whale
- Guadalupe fur seal

Sea Turtles (no species group metrics/benchmark; only individual species metrics/benchmarks)

- Leatherback turtle
- Loggerhead turtle
- Olive ridley turtle
- Green turtle

Albatross species (only species group metric/benchmark)